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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/407,581	09/28/1999	FREDERIC ZENHAUSEN	4467-103US	2941

7590 10/10/2003

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EXAMINER

TSAI, CAROL S W

ART UNIT PAPER NUMBER

2857

DATE MAILED: 10/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/407,581

Applicant(s)

ZENHAUSERN, FREDERIC

Examiner

Carol S Tsai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 October 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13, 15-19 and 43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13, 15-19 and 43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5 and 7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 112

3. Claims 6, 7, 11, and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. In claim 6, it is not understandable what is meant by "human paneling".
5. In claim 7, it is not clear what is meant by "A method according to claim 1 wherein a near-field probe", since the element of "a near-field probe" is not included in claim 1.
6. In claim 11, it is not understandable what is meant by "wherein at least one member of the group consisting of heat, electromagnetic radiation, electricity, magnetism, and mechanical

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vibration at least assists in transferring the analyte from the material to a gaseous or vaporized form.

7. In claim 15, it is not clear what is meant by “wherein a part is a circuit board or a multichip module”, since the element of “a part” is not included in claim 1.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

9. Claims 1-13, 15-17, and 43 are rejected under 35 U.S.C. 102(e) as being anticipated by U. S. Patent No. 6,387,329 to Lewis et al.

Lewis et al. disclose a method for making or monitoring an electronic device, comprising the steps of: measuring at least one analyte from a material in the electronic device, the analyte is a gas, vapor, suspension in a gas or volatile organic compound and detecting more than one chemical property of the analyte (see col. 4, line 31 to col. 5, line 10); combining the detected

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properties to produce a signal output (see col. 22, line 57 to col. 24, line 39), and processing the signal output with multivariate analysis to convert the signal output into information representative of a quality of the material, a constituent of the material, or a variable in processing the material (see col. 22, lines 31-67; col. 23, line 53 to col. 24, line 25; and col. 27, lines 6-23).

As to claims 2 and 5, Lewis et al. also disclose processing the signal output with a pattern recognition algorithm sufficient to classify, compare, or discriminate the material based on the quality, quantity, and performance (see col. 27, lines 24-37).

As to claims 3 and 4, Lewis et al. also disclose the multivariate analysis using unsupervised/supervised statistical pattern recognition (see col. 27, line 57 to col. 28, line 2).

As to claim 6, Lewis et al. also disclose sensory evaluation of the sample materials by human paneling to determine the quality of the material (see Figs 5-7).

As to claim 7, Lewis et al. also disclose a near-field probe comprising a coated optical fiber being used for measuring the at least one analyte (see col. 4, lines 55-63).

As to claim 8, Lewis et al. also disclose the analyte being a gas or a vapor (see col. 4, lines 31-38).

As to claim 9, Lewis et al. also disclose a mixture of the analytes being screened, and the signal output representing the overall properties of the mixture (see col. 25, lines 35-47).

As to claim 10, Lewis et al. also disclose at least one analyte being collected by a static headspace technique (see col. 28, line 39 to col. 29, line 5).

As to claim 11, Lewis et al. also disclose heat assisting in transferring at least one analyte from the material to the gas, vapor, suspension in a gaseous or volatile organic compound (see col. 28, lines 53-59).

As to claim 12, Lewis et al. also disclose a surface acoustic wave being used in the detecting step (see col. 4, lines 55-63).

As to claim 13, Lewis et al. also disclose a metal oxide semiconductor gas sensing device being used in the detecting step (see col. 9, lines 31-40 and col. 10, lines 9-25).

As to claim 15, Lewis et al. also disclose the electronic device being a circuit board (see col. 23, lines 41-52).

As to claim 16, Lewis et al. also disclose the contaminant being organics (see col. 10, lines 9-64 and col. 28, lines 24-38).

As to claim 17, Lewis et al. also disclose using the information in a feedback loop to control the process (see col. 28, lines 14-23).

As to claim 43, Lewis et al. also disclose an apparatus for probing at least the quality of a material used in electronics or optics, comprising: a multivariate detector having at one of a sensing probe, sensing location, or physicochemical property, the multivariate detector capable of detecting at least one analyte of the material (see col. 4, line 31 to col. 5, line 10); transmission means for transmitting a signal between the multivariate detector and a data acquisition system, the data acquisition system capable of converting the signal into raw data and a computational device capable of processing at least part of the raw data using multivariate analysis to create a data set (see col. 23, lines 41-52 and col. 27, line 6 to col. 28, line 2); and an output device capable of displaying the data set (see col. 30, line 60 to col. 31, line 3).

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Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis et al. in view of U. S. Patent No. U. S. Patent No. 6,330,464 to Colvin, Jr. et al.

As noted above, with respect to claims 18 and 19, Lewis et al. disclose the claimed invention, except for the circuit board being in a soldering operation.

Colvin, Jr. et al. teach the circuit board being in a soldering operation (see col. 11, lines 28-36 and col. 22, line 63 to col. 23, line 6).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Lewis et al.'s method to include the circuit board being in a soldering operation, as taught by Colvin, Jr. et al., in order to provide an electrical conduction path through a mechanical interface from the sensors to external devices which detect and process the electrical signals generated by the sensors.

Response to Arguments

12. Applicant's arguments with respect to claims 1-13, 15-19, and 43 have been considered but are moot in view of the new ground(s) of rejection.

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Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carol S. Tsai whose telephone number is (703) 305-0851. The examiner can normally be reached on Monday-Friday from 7:30 AM to 4:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on (703) 308-1677. The fax number for TC 2800 is (703) 308-7382. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2800 receptionist whose telephone number is (703) 308-1782.

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In order to reduce pendency and avoid potential delays, Group 2800 is encouraging FAXing of responses to Office actions directly into the Group at (703) 308-7382. This practice may be used for filing papers not requiring a fee. It may also be used for filing papers which require a fee by applicants who authorize charges to a PTO deposit account. Please identify the examiner and art unit at the top of your cover sheet. Papers submitted via FAX into Group 2800 will be promptly forwarded to the examiner.

Carol S. Tsai

09/29/03


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